

Cynanche Trachealis
An
Inaugural Thesis
on
Cynanche Trachealis
by
William Argyll
of
Virginia
A.D. 1822.

Passed March 17th 1823

Epinephelus

sp.

longipinnatus

Epinephelus

longipinnatus

sp.

longipinnatus

Epinephelus

Cynanche Trachealis

This disease has received a variety of names as *Cynanche Trachealis*, *Cynanche Stridula*, *Morbus Strangulatrix*, *Angina Epidemica*, *Angina Pityriosa*, &c. But the term *Tracheitis* is preferable, because we then have a name indicative of the seat and nature of the disease.

"besides, according to the definition of Cullen, consists in an inflammation of the *Vestibulum Larynx*, or upper part of the Trachea, whether it affects the Membranes of these parts or the Muscles adjoining. This definition I think in part exceptionable, because according to the dissections of all the authors whom I have consulted, it is not confined to the upper part of the Trachea, but on the contrary, we frequently find the disease extending through the whole course of the Trachea, into the Bronchia, and sometimes even into the substance of the Lungs.

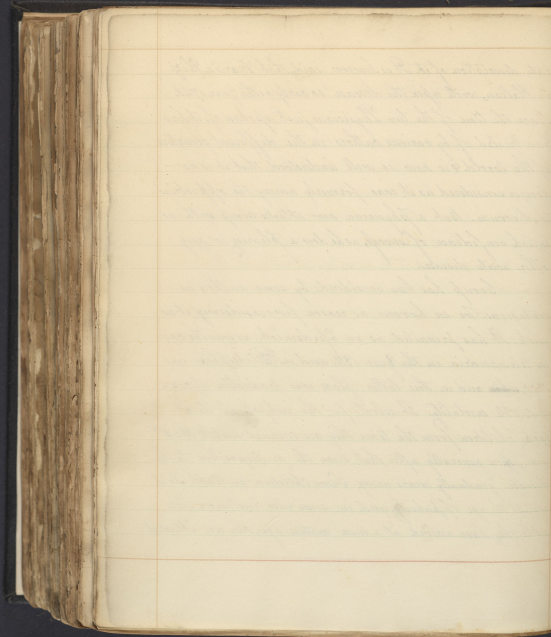
It is strange that we have no account of this disease prior to the time of Boerhaave who wrote about the Year 1758, and according to Cullen was the first who gave an accu-

Myrmica ruginodis

The first nest found in the
spring of 1881 was in a
small hole in the ground
near the house. It was
found by accident, and
the nest was destroyed.
The nest was found in
the spring of 1882, and
was found by accident.
The nest was found in
the spring of 1883, and
was found by accident.
The nest was found in
the spring of 1884, and
was found by accident.
The nest was found in
the spring of 1885, and
was found by accident.
The nest was found in
the spring of 1886, and
was found by accident.
The nest was found in
the spring of 1887, and
was found by accident.
The nest was found in
the spring of 1888, and
was found by accident.
The nest was found in
the spring of 1889, and
was found by accident.
The nest was found in
the spring of 1890, and
was found by accident.

rate description of it. It is however said, that Martin Rizi
an Italian, wrote upon the disease so early as the Year 1749.
Since the time of the two Physicians just spoken of, it has
been treated of by various authors in the different quarters
of the world & is now so well understood, that it is no
longer considered as it was formerly among the opprobria
Medicorum. But a Physician now attacks Croup with as
much confidence of success, as he does a Pleurisy or any
other acute disease.

Croup has been considered by some authors as
contagious. We see however no reason for considering it as
such. It has prevailed as an Epidemick; as was the case
in Alexandria in the Year 1811, and in Philadelphia in
1802, ~~when~~ and in this latter place was productive of con-
siderable mortality. It selects for the subjects of its at-
tack, children from the time they are weaned untill the 5th
year, more generally after that time the predisposition to the
disease gradually wears away. Some children are liable to it
untill the age of puberty, and in some rare instances, even
after they have arrived at a more mature age, they are attacked

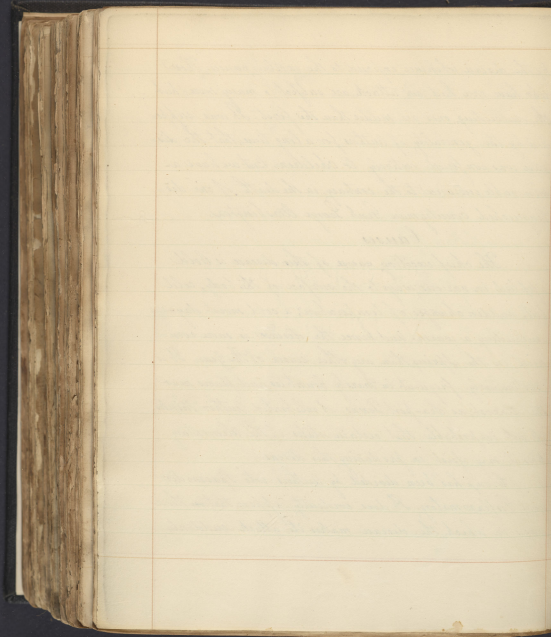


by the disease whenever exposed to the exciting causes. Those who have once had an attack, are subject to many more; but the succeeding ones are milder than the first. It was supposed by the generality of authors for a long time, that the disease was confined entirely to children. But we have a memorable instance to the contrary, in the death of our distinguished countryman Genl George Washington.

Causes

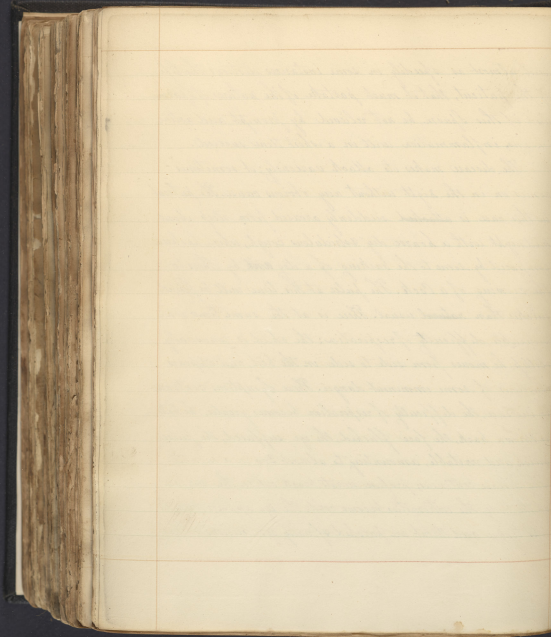
The chief exciting cause of this disease is cold applied in various ways to the surface of the body, cold sub, sudden changes of temperature, a cold moist day, succeeding a warm. And hence the disease is more common in the spring than any other season of the year. It is particularly frequent in marshy countries and places near the seacoast, as Sea-port Towns. A celebrated author thinks it not improbable that certain states of the alimentary canal may assist in producing this disease.

Croup has been divided by authors into Spasmodic and Inflammatory. It does evidently appear that in those cases in which the disease makes its attack suddenly,



and almost as speedily in some instances destroys the life of the patient, that it must partake of the nature of Spasm, and if this Spasm be not relieved by prompt and active means, inflammation will in a short time succeed.

The disease makes its attack variously; it sometimes comes on in the night without any obvious cause. The patient in this case is ~~attacked~~ suddenly aroused from sleep about midnight with a hoarse dry stridulous cough, which has been compared by some to the barking of a dog and by others to the crowing of a cock. The pulse at this time will be found quicker than natural usual. There is at the same time considerable difficulty of respiration: the child is unusually restless, he moves from side to side in the bed, and appears conscious of some imminent danger. These symptoms continue to increase, the difficulty of respiration becomes greater, the head is thrown back, the face flushed, the eye suffused, the pulse quick and irritable, amounting to almost 200 in a minute. The disease continues, profuse sweats break out on the surface of the body, the extremities become cold, the eye appears wild, the lips tongue and throat are parched & finally convulsions succeed.

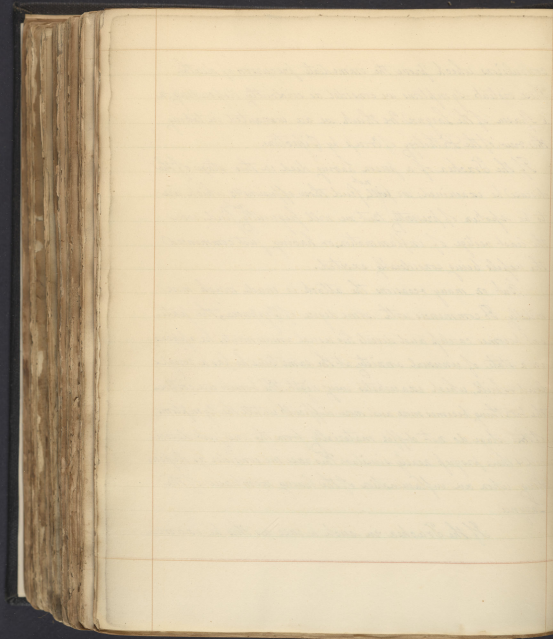


convulsions which prove the immediate precursion of death. These violent symptoms we consider as evidently depending on a spasm of the Larynx. We think we are warranted in taking this view of the Pathology of Croup by Suffocation.

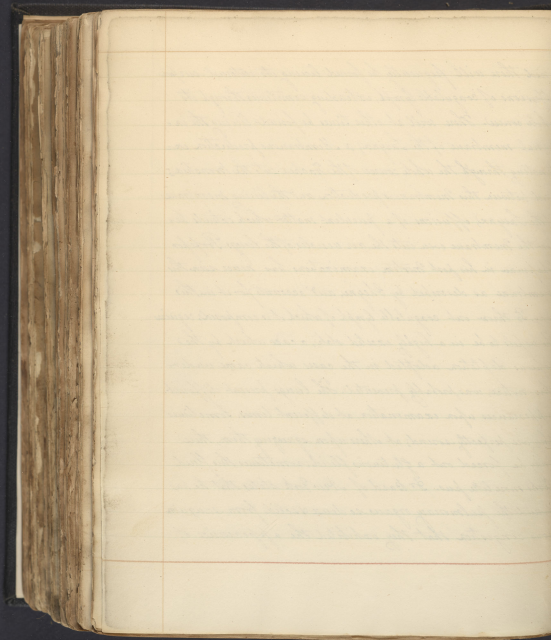
If the Trachea of a person having died in this stage of the disease be examined; we ~~will~~^{not} find those effusions to which are to be spoken of presently. But we will frequently ~~find~~^{not} even the least vestige of inflammation; or having just commenced the vessels being considerably excited.

But on many occasions the attack is made much more mildly. It commences with some degree of Dyspnoea, the patient becomes restless and deserts his usual amusements, he appears in a state of unusual anxiety, at the same time he has a cough loud & hoarse, which exacerbates every night. The bowels are constipated, the breathing becomes more and more difficult untill the symptoms of this stage do not differ materially from the one just described & their progress nearly similar. This case we consider as depending upon an inflammation of the lining membrane of the Larynx.

If the Trachea in such a case as this be exam-



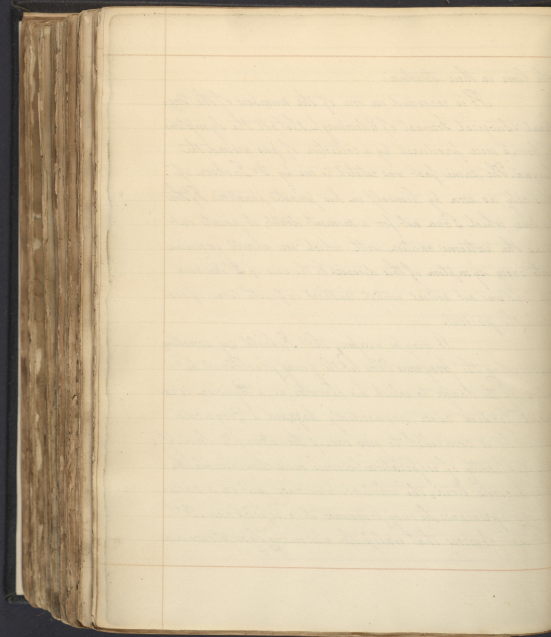
ined, there will frequently be found lining its internal surface
effusions of coagulable lymph, extending sometimes through its
whole course. There will at other times be found lining the in-
ternal membrane of the Larynx, a Membranous production ex-
tending through the whole course of the Trachea into the Bronchia;
and between this membranous production and the lining membrane
of the Larynx, effusions of a purulent matter which extends be-
low the membrane even into the air vesicles of the lungs. Professor
Chapman in his post mortem examinations has never seen this
membrane as described by Cheyne, and accounts for it in this
way. To throw out coagulable lymph of which it is composed, requires
the vessels to be in a highly excited state, a case which by the
copious depletion adopted in the cases which came under
his notice, was probably precluded. The lungs present different
appearances upon examination, at different times. Sometimes
they are perfectly sound; at others upon squeezing them, there
may be forced out a glutinous fluid; sometimes this fluid
looks more like pus. Dr Ward of New York states that he has
found the pulmonary organs so dense & solid from sanguin-
ous congestion that they exhibited the appearance of



the bone in their structure.

It is recorded in one of the numbers of the Medical & Surgical Journal of Edinburgh, that all the symptoms of bronch were produced by a collection of pus around the Larynx. The same fact was related to me by Dr Jackson of this city as seen by himself in his private practice. If this be true which I can not for a moment doubt, it points out to us the extreme caution with which we should examine into every symptom of this disease. In the case of Dr Jackson the pus was not noticed untill the third or fourth time of visiting the patient.

It may be necessary that I should say something concerning the prognosis. I've led the young practitioner be aware of the danger to which his character as a Physician is exposed. Let him never unguardedly hazard a Prognosis. When he is compelled to give one; if the strength fail, if the difficulty of respiration becomes more considerable, the lips become livid, the whole countenance put on a cadaverous appearance, he may pronounce it a fatal case. Dr Ferriar observes that unless the alarming symptoms are

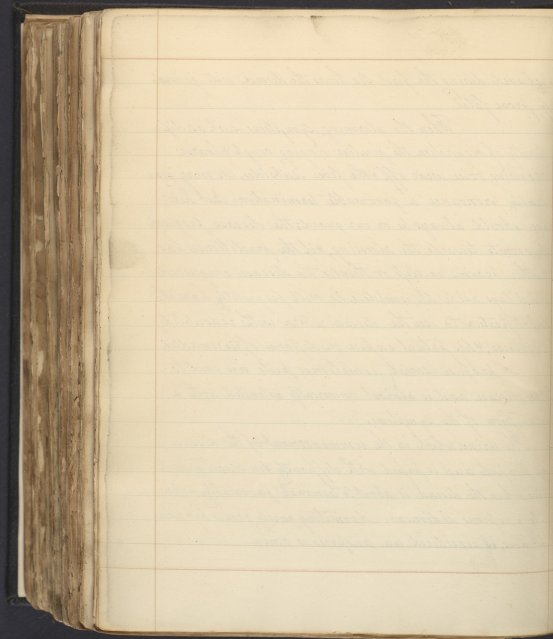


relieved during the first six hours the disease will generally prove fatal.

When the alarming symptoms such as, difficulty of respiration, the peculiar ringing cough & hoarse croaking voice wear off & the fever subsides, we may generally pronounce a favourable termination. But here we should always be on our guard; the disease frequently remits towards the morning & if the practitioner has either become careless or thinks the disease conquered and lays aside his remedies, he will frequently have the mortification to see the disease return with redoubled violence, & his patient expire in defiance of his remedies.

A profuse sweat sometimes puts an end to the disease and is almost universally attended with a remission of the symptoms.

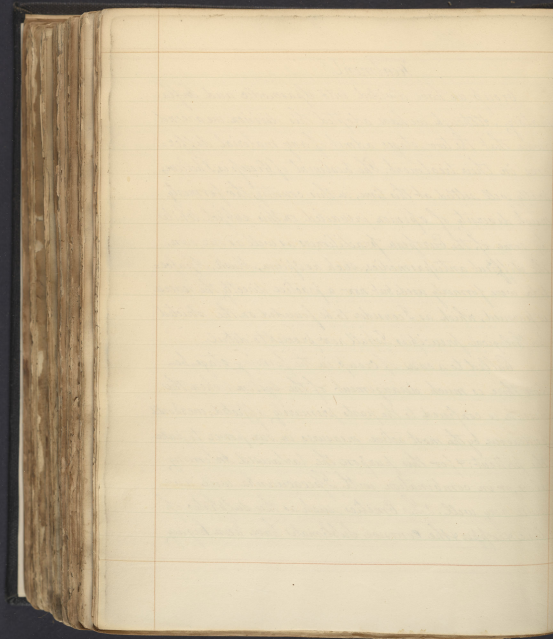
The urine, which in the commencement of the disease is limpid and is passed with difficulty in small quantities, when the disease is about to terminate favourably, deposits a copious sediment. Vomiting rarely occurs but when it does, is considered an auspicious omen.



Treatment

Croup we have divided into spasmodic and Inflammatory. Although we have adopted this division, we are not aware that the two stages admit of any material difference in their treatment. The treatment of Croup is, I believe, pretty well settled at this time, in this country, tho' formerly much diversity of opinion prevailed on this subject. While by some of the European practitioners as well as our own, the different antispasmodics, such as Opium, Mush, Apapocida were formerly used: but now a practice directly the reverse is pursued, which as I consider to be founded on the strictest pathological principles I shall now proceed to detail.

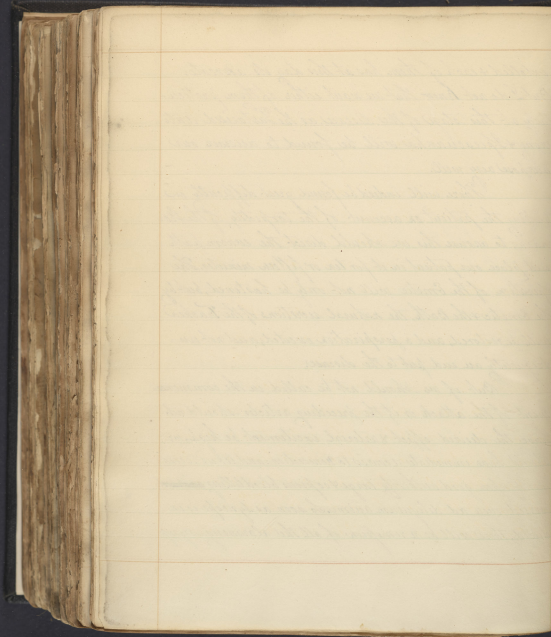
Called to a case of Croup in the forming stage before there is much derangement of the system when the disease is confined to the parts primarily affected, we should endeavour by the most active measures in our power to rouse the patient: & for this purpose the tartarised Antimony alone, or in combination with Ipecacuanha will answer very well. Other Emetics such as the Sulphates of Zinc & Copper & the corrosive Sublimates have been highly



extolled & each of them has at this day its advocate.
But I do not know that we want either of them particu-
larly at this stage of the disease, as the Tasted Antie-
moms & Speaccharas will be found to answer our
purpose very well.

There will indeed be found great difficulty in
putting the patient on account of the torpidity of the Sto-
mach^{us}; to accuse this we should direct the warm bath
and place our patient in it for ten or fifteen minutes. The
operation of the Emetic will not only be hastened, but by
the Emetic & the Bath, the natural secretions of the Trachea^{us}
will be restored, and a perspiration excited, and not un-
frequently an end put to the disease.

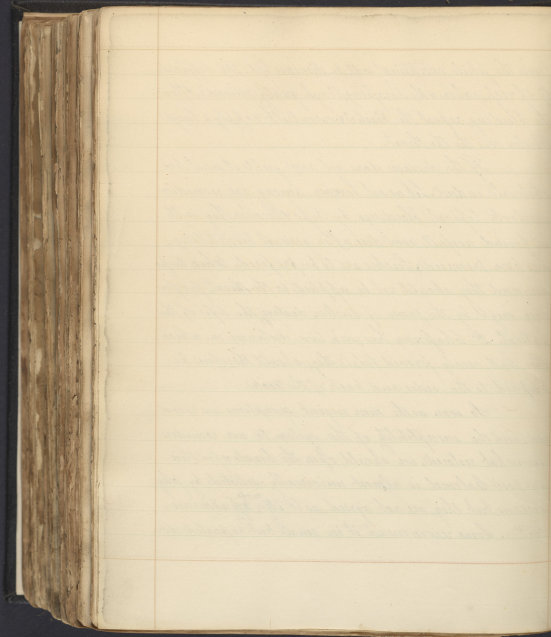
But if we should not be called in the commence-
ment of the attack or if the preceding articles should not
have the desired effect & arterial excitement be high, we
should have immediate recourse to veni-section, and let us recom-
mend upon good authority large & copious bloodletting ~~and~~
carried even ad deliquium animi. As soon as syncope is in-
duced, there will be a remission of all the alarming symp-



tion. the febrile excitement will be diminished, the difficulty of respiration & the harassing cough, greatly relieved. After the bleeding repeat the Emetic & warm bath & apply a large blister over the throat.

If the disease does not now yield it must be obstinate indeed. Let us not however among our remedies overlook topical bleedings by Cups & Leeches. They will be found useful remedies after general bloodletting has been premised, Leeches are to be preferred. When Cups are used they should not be applied to the throat, for fear they might by the power of suction destroy the life of the patient. Dr. Chapman has seen two instances in which they had nearly proved fatal, they should therefore be applied to the sides and back of the neck.

As soon as the more urgent symptoms are removed, and the susceptibility of the system to our remedies somewhat restored, we should open the bowels & for this purpose Calomel is almost universally selected by physicians, but they are not agreed as to the ^{mode} of administration. Some recommend it in small but repeated do-



us; others in large ones that it may act speedily and promptly. In this particular stage of the disease observes Professor Chapman a thorough opening of the bowels carries off the lingering symptoms, obviates a relapse, & confirms the convalescence.

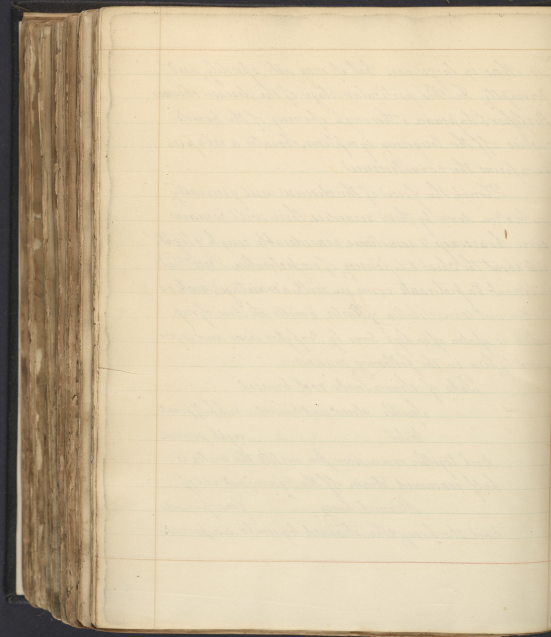
Though the force of the disease will generally be broken down by these remedies, there will remain some hoarseness & sometimes considerable cough & tightness about the chest & deficiency of expectoration. Here the different Expectorants come in with advantage, such as antimonial wine, Solution of Tartar. Emetic, the Vine of Mars, which is spoken of in high terms by Professor Coxe and is prepared by him in the following manner.

Take of Seneca Snake root bruised

Squills, sliced and bruised. each half pound
Water eight pounds

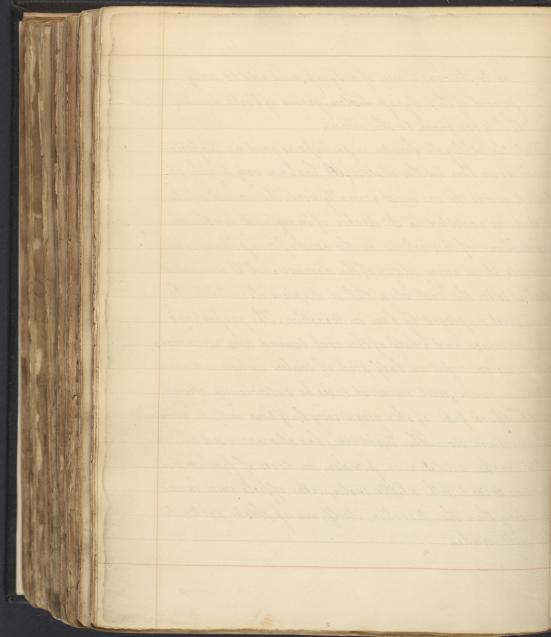
Boil together over a slow fire, untill the water is half consumed strain off the liquor and add of

Strained honey four pounds
Boil the honey & the strained liquor to six pounds



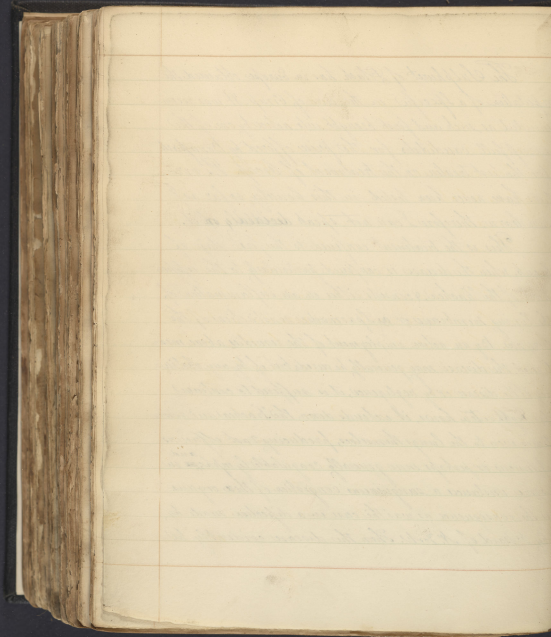
or to the consistence of a Syrup, and add to every pound of this Syrup sixteen grains of Pector Emetic, that is one grain to the ounce.

But the *Polygala Senega* is perhaps as good an Expectorant as we have in this disease. It has been very highly extolled and is the one most generally used. The science of Medicine is indebted to Dr Archer of Maryland for the introduction of this article in the cure of croup. He recommends it in every stage of the disease, but it is we doubt that it is in the last stage that it displays its utility. It was first employed by him in decoction. The proportions of one ounce and a half of the root bruised and simmered in a close vessel in half pint of water untill reduced to four ounces, will in most cases be sufficiently strong. A tea spoon full of this given every half hour will be about the medium dose. This medicine has also been used by Dr Archer and Son in powder, in doses of five or six grains mixed with a little water, with effects even more pleasing than the decoction itself, unless this be particularly well made.



The Sulphuret of Potash has in Europe obtained the reputation of a Specific in the cure of Croup. It was recommended as such and first brought into notice by one of the successful candidates for the prize offered by Bonaparte for the best treatise on the treatment of Croup. Its virtues have never been tested in this country so far as I can learn; therefore I can not speak decidedly of it.

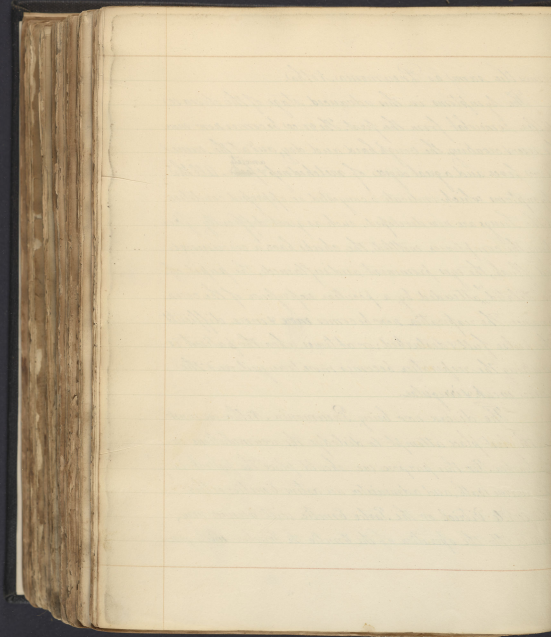
This is the treatment confined to the first stage of Croup, when the disease is confined particularly to the upper part of the Trachea, & consists either in an inflammation of the lining membrane or in spasmodic contractions of the Larynx. By an active employment of the remedies above mentioned the disease may generally be cured, but if by any obstinacy of the disease or by negligence, it is suffered to continue for Eight or ten hours, it extends down the Trachea and sometimes even to the lungs themselves, producing vast effusions of Mucus or perhaps more generally coagulable lymph^{and} in some instances a sanguinous congestion of these organs is the consequence as was the case in a dissection made by Dr. Leard of N. York. Then the disease evidently be-



comes the same as Pneumonia. Scroth.

The symptoms in this advanced stage of the disease differ somewhat from the first. The voice becomes now more hoarse & creaking, the cough hard and dry, and at the same time fever and a great degree of watchedness ^{anxiety} ~~of fever~~. All the symptoms which indicate a congested or oppressed condition of the Lungs are now developed; such as great difficulty of breathing, the complexion mottled, the cheeks have a circumscripted flush, the eyes prominent and inflamed, the pupil often dilated, attended by a peculiar expression of the countenance. The respiration now becomes more & more difficult the pulse full & disturbed; or at times when the patient is sinking the respiration becomes more tranquil and the pulse weak & irregular.

The disease now being Pneumonia. Scroth we must in the first place attempt to dislodge the accumulations in the trachea. For this purpose we should place the patient in the warm bath, and administer an active emetic; either the white Vitriol or the Barbe emetic will answer very well. After the operation of the emetic the trachea will gen-

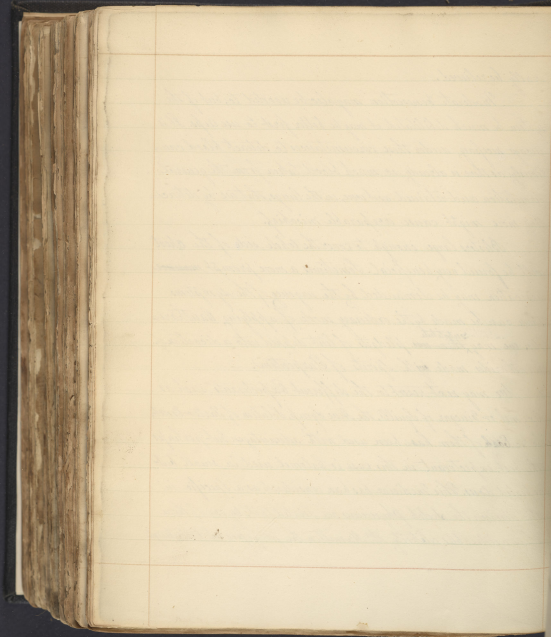


erally be relieved.

Moderate venesection may also be resorted to; but if the system be much debilitated, it may be better first to use cups. It is always necessary, under these circumstances to detract blood cautiously; as there is already so much blood taken from the general circulation and retained as it were, in the lungs, that too by detaching more might cause irreparable mischief.

Blisters large enough to cover the whole side of the chest will be found very beneficial. Sometimes a more prompt ~~more~~ vesication may be demanded by the urgency of the symptoms than can be made by the ordinary mode of applying cantharides; we may ~~then~~ ^{substitute} ~~use~~ plaisters of lint dipped into a decoction of cantharides made ~~with~~ ⁱⁿ Spirits of Turpentine.

We may next resort to the different Expectorants such as Oxymel or Vinegar of squills, the Hone Syrup, Solution of Sassafras &c. &c. Each of them have been used with advantage; but perhaps the best expectorant in this case is Balsam used in small but repeated doses. This medicine has been considered as a specific in this disease; the Scotch physicians are devoted to it; by one of them of considerable celebrity Dr. Hamilton the professor at Edinburgh



it is spoken of in the most enthusiastic terms. The observers that if it be administered previous to the accession of the lividness of the lips and other mortal symptoms, he has always succeeded in every case of Croup, without any shock to the constitution of the child. This mode of administering it would indeed appear to be bordering upon rashness, were we not to take into consideration the extreme insensibility of the system to our remedies in this disease. He has administered upwards of two hundred grains in the twenty four hours to a child two years old.

The *Modus operandi* of Calomel is I think intelligible; it stimulates the excretory vessels of the bronchia and lungs to action & thus enables them to throw off the Mucus with which they are loaded.

Thus I have concluded this imperfect essay upon *Epiglottitis, Trachealis*. I have intentionally passed over the operation of *Bronchotomy* or *Laryngotomy* in silence. It is now considered to be rarely if ever necessary, as we can not distinguish those cases in which it might prove serviceable. The operation is condemned by Cheyne as absurd & impracticable and says that no good & faithful surgeon should perform it.

